



EFFECT OF SIRAVYADHA AND MAANIBHADRA LEHYA IN SIRAJAGRANTHI W S R TO VARICOSE VEINS

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ABSTRACT

Sirajagranti denotes a pathological condition characterized by elevated and dilated veins, which are non-pulsating and painless. Varicose veins are common condition in surgical practice mostly found in people who sit or stand in one position for prolonged period of time. "Varicosity is the penalty for verticality against gravity" which is characterized by dilated, elongated and tortuous veins. *Siravyadha* along with *Maanibhadra lehya* was taken for observational study at Sri Kalabyraveswaram Ayurvedic Medical College Hospital & Research Centre, Vijayanagar, Bangalore. Post approval of the institution ethical committee, selected patients were subjected to *siravyadha karma* for 2 sittings at an interval of 15 days along with the administration of *Maanibhadra lehya* for 30 days. *Siravyadha* has proved highly beneficial by providing immediate results. The ingredients of *Maanibhadra lehya* have *vatakaphahara*, *shothaghna*, *kushtaghna*, *anulomana* and *rasayana* properties which contributes towards the diminution of symptoms of *Sirajagranti*. All patients completed the study successfully without any drop outs and the overall results showed marked improvement.

KEYWORDS: *Maanibhadra lehya*, *Sirajagranti*, *Siravyadha*, Varicose veins.

INTRODUCTION

Sirajagranti is mentioned as one of the *granthirogas* described in various Ayurvedic classics which denotes a pathological condition characterized by elevated and dilated veins, which are non-pulsating and painless. Due to *vataprakopaka nidanas* like physical exertion and straining, *vayu* enters the *siras* causing *Sampeedana*, *Sankocha*, *Vishoshana* and leads *granthi* formation in *Sira*.^[1]

When a vein becomes dilated, elongated and tortuous, the vein is said to be 'varicose'.^[2] They are most commonly found in people who sit or stand in one position for prolonged period of time. They affect about 10-20% of the world population.^[3] Women are twice as susceptible than men. In the disease *sirajagranti*, the main vitiated factors are *vata* and *rakta*. *Siravyadhana* is one such radical treatment specially concerned with *dushta rakta nirharana* in *sirajagranti*.^[4] In the present study, all patients were subjected to *siravyadha karma* for 2 sittings at an interval of 15 days using S.V set, so that optimum amount of vitiated blood was removed from the maximum tortuous area. *Maanibhadra lehya* was employed in the study which has *vatakaphahara*, *rakthashodhaka* properties which is said to be effective in *granthiruk*.^[5] and brings down the symptoms of

sirajagranti owing to its ingredients *vidanga*, *amalaki*, *haritaki*, *trivrut* and *guda* which are *raktashodhaka*, *shoolahara*, *shothahara*, *dahaprashamana*, *kushtagna* and *rasayana* properties.

Hence this clinical trial was aimed to evaluate the efficacy of *Siravyadha* and *Maanibhadra lehya* in the management of *sirajagranti*.

MATERIALS AND METHODS

The present study was an observational study with open label study design. All subjects were subjected to *siravyadha karma* with sterile scalp vein set needle no 18 or 20 gauze for 2 sittings at an interval of 15 days and advised to take 6g of *Maanibhadra lehya* with water daily before breakfast for 30 days which was prepared as per the description in AFI.

Subjective Parameters

- *Shoola*
- *Kandu*
- *Daha*

Objective Parameters

- *Grathana*

- *Shohta*
- *Vaivarnyata*

Parameters with gradation Score

- SHOOLA** (Dull aching pain in affected limb)
 - 0 – No pain.
 - 1 – Pain after prolonged standing.
 - 2 – Pain after slight exertion.
 - 3 – Pain throughout the day.
- KANDU** (Itching in the affected area)
 - 0 – No itching.
 - 1 – Occasional localized itching.
 - 2 – Frequent localized itching.
 - 3 – Persistent itching throughout the day.
- DAHA** (Burning sensation in affected area)
 - 0 – No burning sensation.
 - 1 – Occasional localized burning sensation.
 - 2 – Frequent localised burning sensation.
 - 3 – Persistent burning sensation throughout the day.
- GRATHANA** (Tortuosity)
 - 0 – No dilated veins.
 - 1 – Few veins dilated after exertion.
 - 2 – Multiple veins confined to calf or thigh.
 - 3 – Extensive involving both calf and thigh.
- SHOTHA** (Ankle edema)
 - 0 – No oedema.
 - 1 – Oedema after prolonged standing.
 - 2 – Oedema after slight exertion.
 - 3 – Oedema throughout the day.

- VAIVARNYATA** (Pigmentation at the gaiter area of affected limb)
 - 0 – No discolouration.
 - 1 – Mild hyperpigmentation.
 - 2 – Blackish patchy hyperpigmentation.
 - 3 – Hyperpigmentation with eczema.

Sample Size and Method

- Sample size: 30 without any drop outs.
- Study design: An active single arm open label clinical study.
- Number of groups: Single group

Duration of Treatment: *Siravyadha karma* for 2 sittings at an interval of 15 days and *Maanibhadra lehya* 6gm with water daily before breakfast for 30 days.

- **Follow up:** once on 15th day after the treatment.
- **Investigations:** Haemoglobin%, Random Blood Sugar, Clotting Time, Bleeding Time.

The volunteers for this study enrolled between 01/01/16 to 01/07/16 from the OPD/IPD of department of *Shalyatantra* of SKAMCH&RC, Vijayanagar, Bangalore based on the designed protocol which has been approved by the institutional ethical committee. The volunteers were recruited for the study based on inclusion and exclusion criteria, adherence to the guidelines of Case Report Forms and follow up protocol.

Inclusion Criteria	Exclusion Criteria
<ul style="list-style-type: none"> • Patients aged between 16-70 years, irrespective of sex. • Patients suffering from primary varicose veins. • Patients with <i>Sirajagranthi</i> in lower limb only. 	<ul style="list-style-type: none"> • Patients with systemic diseases that may interfere the course of study. • Patients with coagulopathy or bleeding disorders, Congenital varicose veins. • Patients who are unfit for <i>siravyadha</i>.

OBSERVATION AND RESULTS

TABLE NO.1 SHOWING STATISTICAL ANALYSIS ON RELIEF OF VARIOUS PARAMETERS

PARAMETER	MEAN		MEAN DIFFERENCE	PAIRED "t" TEST				REMARKS
	BEFORE	AFTER		SD	SE	t-VALUE	P-VALUE	
<i>SHOOLA</i>	2.37	0.33	2.03	0.77	0.17	11.88	<0.001	HS
<i>KANDU</i>	1.58	0.17	1.42	0.52	0.12	12.30	<0.001	HS
<i>DAHA</i>	1.71	0.57	1.14	0.90	0.20	5.68	<0.01	HS
<i>GRATHANA</i>	2.1	1.4	0.7	0.47	0.10	6.71	<0.001	HS
<i>SHOTHA</i>	1.75	0.75	1	0.73	0.16	6.12	<0.001	HS
<i>VAIVARNYATA</i>	1.5	1.25	0.25	0.46	0.10	2.41	<0.05	S

DISCUSSION ON OBSERVATIONS

- **Age:** 33.33% of the patients belonged to the age group of 41- 50 years. Advanced age is the predisposing factor in the causation of varicose veins. This may be due to the reason that progressive *vata prakopa* occurs with advancing age causing atrophy, weakness of the vein wall and the valves in the veins become gradually incompetent.
- **Gender:** 63.33% of the patients were female. Varicose veins has high prevalence in women than men.
- **Socio-economic status:** 36.66% of the patients belonged to the lower middle class and 30% belonged to middle class. Demanding life style of lower middle class/middle class people and also less concern over the health may be the reason for this observation.

- **Educational status:** 36.66% of the patients had education upto high school. Lack of awareness about the disease and negligence of the condition is a contributing factor.
- **Occupation:** 43.33% of the patients were home makers, 13.33% were shop keepers, 13.33% were businessmen, 10% were mechanics, 6.67% were teachers. Varicose veins are most commonly found in people who stand in one position for prolonged period of time. Hence this observation is the reflection of the professionals whose job demands prolonged standing.
- **BMI:** 43.33% of the patients were overweight and 16.66% were obese. Over weight is one among the etiological factors for varicose veins which induce more pressure over the column of blood in the veins leading to the malfunctioning and incompatibility of the valves, ultimately causing varicose veins. In obesity, excessive fatty tissue in the subcutaneous tissue offer poor support to the veins which leads to the formation of varicosity.
- **Prolonged standing:** In this study, all the patients indulged in prolonged standing in which maximum of 40% had history of prolonged standing for 11-20 yrs. During prolonged standing, long column of blood along with gravity puts pressure on the weakened valves of the veins. This causes failure of the valves giving rise to varicosity. During prolonged standing, the calf muscles also do not work quite often so the calf pump mechanism also cannot push the venous blood upwards. Varicose veins are thought to develop more often in people who stand for long time.
- **Duration of the disease:** Incidence of duration of the disease showed 73.33% had more than one year disease chronicity. This may be due to the negligence of the disease in its prior stages which is almost asymptomatic.
- **Affected Lower limb:** 46.66% patients were affected with varicosities in both legs, left lower limb was effected in 33.33% patients and right lower limb was effected in 20% patients. The reason might be due to the fact that during prolonged standing and strenuous works, equal pressure exerts on both the lower limbs. This data supports the textual reference that left limb is more commonly affected than right, but reason is not known.
- **Samyak lakshanas of raktamokshana:** All patients achieved *samyak lakshanas* of *raktamokshana* like *laghava*, *vedanashanthi*, *vyadhi vega parikshaya* and *mana prasada*. This might have helped in managing the various signs and symptoms of the disease and thereby providing the considerable relief to the patients.

DISCUSSION ON RESULTS

- **EFFECT ON SHOOLA:** *Siravyadha* reduces the venous hypertension and capillary pressure leading to the reduction in pain. Thus by removing *sanga* of vitiated *vata* and *rakta*, *Siravyadha* reduces *Shoola*. This can be attributed to the *samyak lakshana* of *raktamokshana*. There is added effect of *Maanibhadra lehya* on *shoola*, owing to *anulomana* property of *haritaki*, *amalaki* and *trivrut*, *vatahara* property of all the ingredients.
- **EFFECT ON KANDU:** *Siravyadha* acts on *Kandu* by the removal of stagnant *dushtarakta* which had cause *Sanga*. When stagnated blood is drained out, capillary congestion decreases which prevents extravasations and deposition of histamine, thus reduces itching. *Maanibhadra lehya*, acted owing to the *Raktashodhaka* property of *Vidanga*, *kapha shamaka* property of all the ingredients and *kaphashodhaka* property of *Trivrut*.
- **EFFECT ON DAHA:** *Siravyadha* reduces venous hypertension which prevents hyperviscosity of red cells, leukocyte adhesion and platelet hyperaggregation. By enhancing capillary permeability and cutaneous microcirculation, it reduces burning sensation. *Siravyadha* acted on *Daha*, by the virtue of its *pittahara* and *raktashodaka* properties by removal of stagnant vitiated blood. *Maanibhadra lehya*, acted owing to the *dahashamana* property of *Amalaki*, *pittasamshodhaka* property of *Trivrut* and *pittahara* property of *Amalaki* and *Haritaki*.
- **EFFECT ON GRATHANA:** The effect of *siravyadha* may be probably due to the removal of locally accumulated blood from the superficial veins which reduces intravenous pressure. When high back pressure reduces, it inturn reduces engorgement and tortuosity, thus *siravyadha* which is indicated in *sirajagranthi* has shown considerable result on *grathana*. *Maanibhadra lehya* has acted upon *Grathana* by *kaphavatahara* property of *Vidanga* and *guda*, *tridosahara* property of *Haritaki* and *Amalaki* which relieves the *srothorodha*, regains *chala guna* of *vata* and helps in venous drainage.
- **EFFECT ON SHOTHA:** By *Siravyadha*, the venous pressure at the ankle reduces which prevents stasis of the fluid in sub dermal tissues, thereby reduces *Shotha*. *Maanibhadra lehya* has acted upon *shotha* owing to the *Shothahara* property of drugs like *haritaki* and *trivrut*.
- **EFFECT ON VAIVARNYATA:** As *siravyadha* is indicated in *twakdosha* and *shonitaja rogas*, it has shown result by draining the *dushta rakta* out and relieving congestion. Thus there is no further deposition of Haemosiderin in the skin and there is

no subsequent pigmentation. *Maanibhadra lehya* has acted upon *vaivarnyata* owing to *raktapitthahara* property of *Amalaki*, *kushtaghna* and *raktashodhaka* properties of *Vidanga* which helps in restoring the normal skin pigmentation thereby, reducing *vaivarnyatha* of *twacha*.

FOLLOW UP

The improvement in the disease condition noted during the study period sustained as such in course of the follow up period.

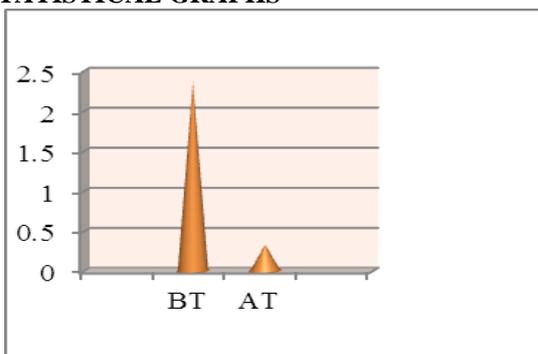


Plate no.1 showing the method of preparation of *Maanibhadra lehya*

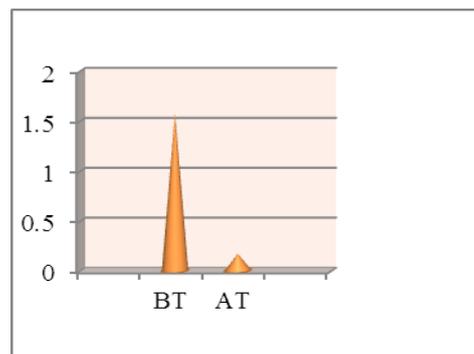


Plate no.2 showing *siravyadha* procedure

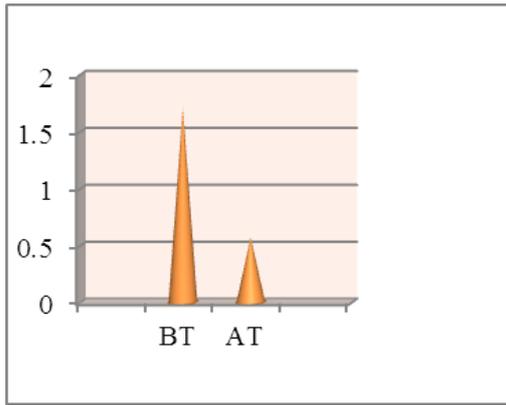
BIO STATISTICAL GRAPHS



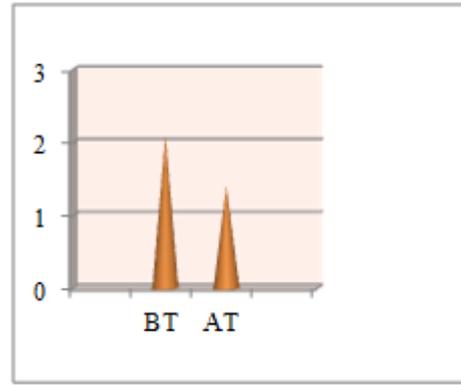
Graph.1 showing relief in *Shoola*.



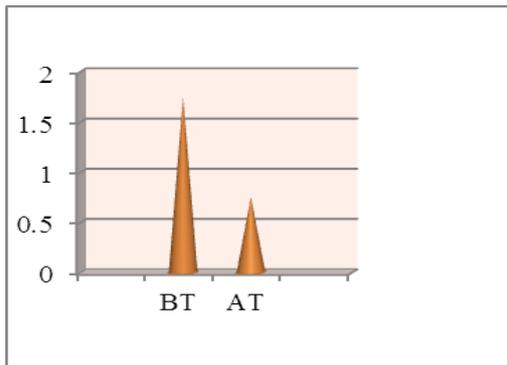
Graph.2 showing relief in *Kandu*



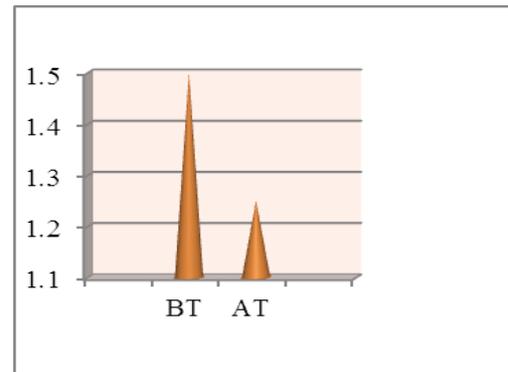
Graph.3 showing relief in *Daha*



Graph.4 showing relief in *Grathana*



Graph.5 showing relief in *Shotha*



Graph.6 showing relief in *Vaivarnyata*

Flow chart no.1 -Pathogenesis of varicose veins and mode of action of *siravyadha*

Pathogenesis

Incompetence of venous valve



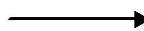
Stasis of blood



This can be removed by *Siravyadha*



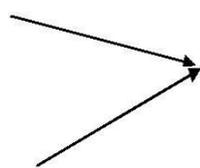
Defective microcirculation



Improved by draining out the stagnant blood



R.B.C. diffuses in tissue planes



Dead R.B.C. removed by *Siravyadha*



Lysis of R.B.C.



Release of haemosiderin



Free iron can be utilized by fresh blood



Pigmentation



It does not occur if there is no free iron or haemosiderin

Mode of action of *Siravyadha*

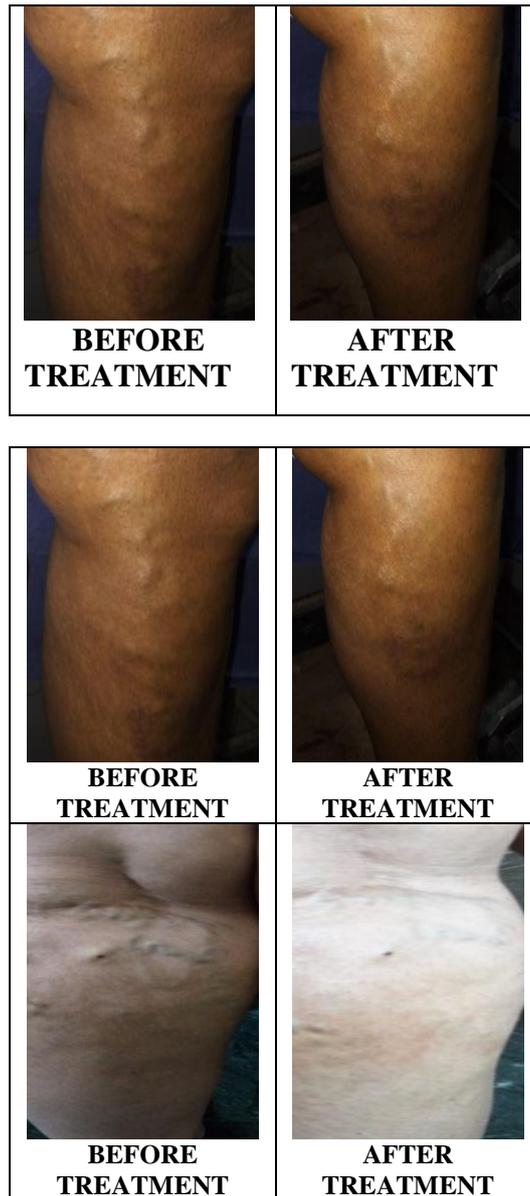
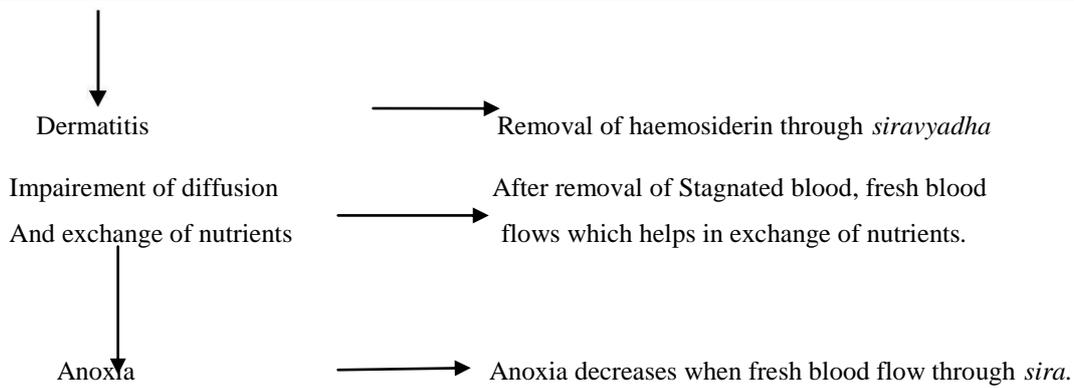


Plate no.3 showing the condition of varicose veins before and after treatment

CONCLUSION

The study was carried out with an aim to evaluate the efficacy of *Siravyadha* with *Maanibhadra lehya* in *Sirajagranthi* w.s.r to varicose veins. The following conclusions were drawn based on the observations made in this clinical study. *Sirajagranthi* is a common clinical

condition affecting the lower limbs and the incidence being prevalent in this era owing to the faulty life style. Incidence of Varicose veins was more in people belonging to the occupation that involved prolonged standing.

Raktamokshana treatment has got an edge over all other modalities in terms of relieving the symptoms immediately, modifying the underlying pathology and also reducing the duration of treatment, thus proved highly beneficial quoted to be *ardha chikitsa* of *Shalya tantra* and has provided immediate results. *Siravyadha* is a simple cost effective OPD procedure, by using S V Set, vitiated blood was removed from the maximum tortuous area. The procedure was well carried out without any untoward effects.

Maanibhadra lehya has *vatakaphahara*, *shothagna*, *kushtagna*, *anulomana* and *rasayana* properties which contributes towards the diminution of symptoms of *Sirajagranthi* and can be considered as adjuvant therapy after *siravyadha* for *shesha dosha nirharana*. Highly significant results were achieved on *Shoola*, *Kandu*, *Daha*, *Grathana* and significant result was achieved with regard to *Vaivarnyata*. The overall results showed marked improvement. On statistical analysis, combination of *Siravyadha* and *Maanibhadra lehya* was found to be highly significant in relieving the symptoms of *Sirajagranthi* ($P < 0.001$).

REFERENCES

1. Sushruta. Sushruta samhitha with commentary of Dalhana. edited by Vaidya Jadavji Trikamji Acharya. Chowkamba Orientalia Varanasi. Ed 7th 2002. Nidana sthana. Ch.11. Verse 8. pp.824. pg. 311.
2. Somen Das. A concise textbook of surgery. 7th ed. Kolkata, 2012. Chapter 16. pg. 256.
3. Bailey & Love. Short practice of surgery. Edited by Norman Williams. Christopher. Russell. Edward Arnold publications. Ed 25th 2008. pp. 1406. pg .927.
4. Vagbhata. Annotated by Anna moreswar kunte and Krishna ramachandra Sastri Narre. edited by Harisadasiva Sastri. Ashtanga Hridayam with commentaries of Sarvanga Sundari of Arunadutta and Ayurveda rasayana of Hemadri. Published by Chaukhambha Surbharathi Prakashan Varanasi. Ed 1997. Uttara sthanam. Ch. 30.Verse.7. pp.956. pg.884.
5. Vagbhata. Annotated by Anna moreswar kunte and Krishna ramachandra Sastri Narre. edited by Harisadasiva Sastri. Ashtanga Hridayam with commentaries of Sarvanga Sundari of Arunadutta and Ayurveda rasayana of Hemadri. Published by Chaukhambha Surbharathi Prakashan Varanasi. Ed 1997. Chikitsa sthanam. Ch.19. Verse (31)(32). pp. 956. pg. 713.